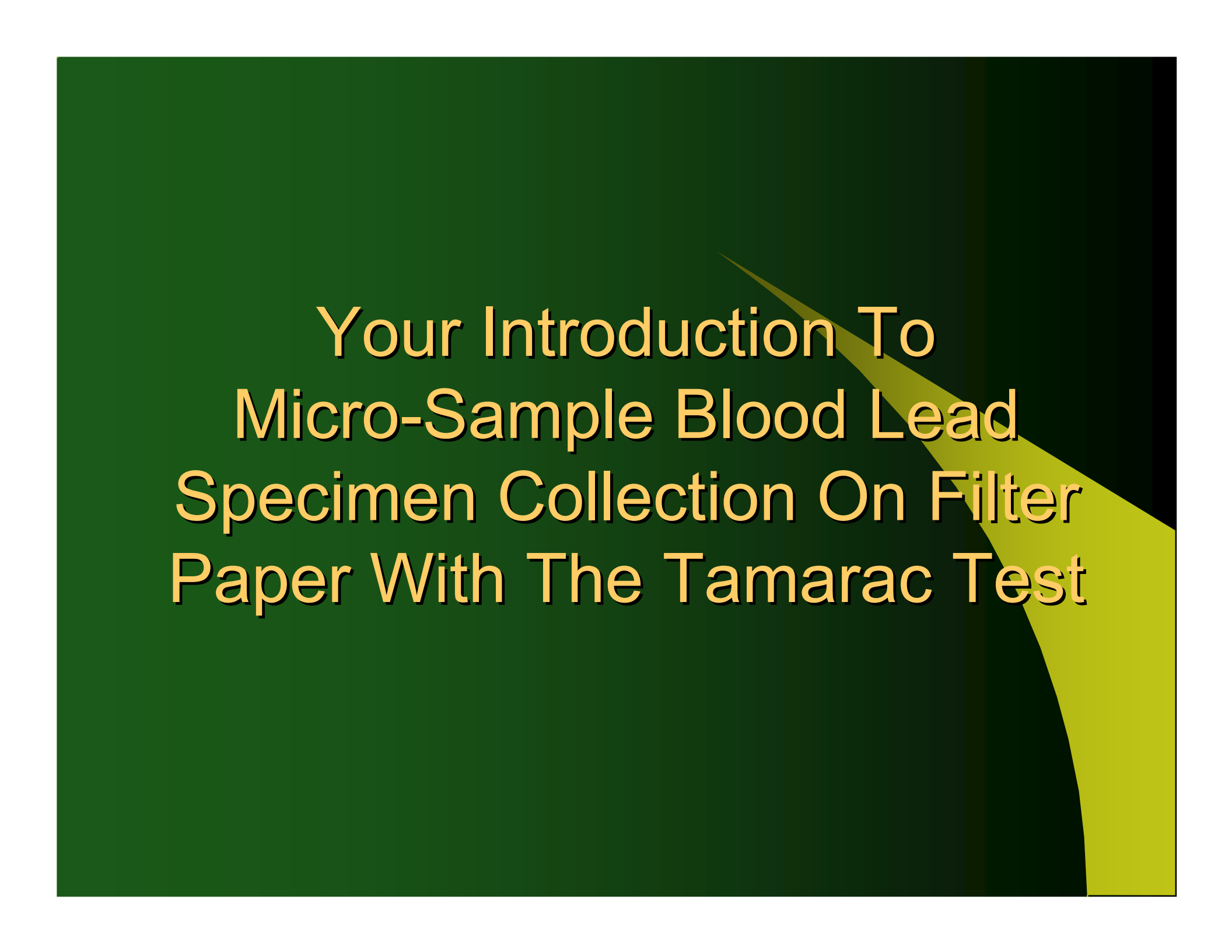




**Welcome
To Tamarac
Medical**



Your Introduction To Micro-Sample Blood Lead Specimen Collection On Filter Paper With The Tamarac Test

The Tamarac Medical Filter Paper Quantitative Blood Lead Test

A decorative graphic on the right side of the slide, consisting of a bright yellow-green triangular shape that appears to be a folded corner of a piece of paper, set against a dark green background.

The Tamarac Test

Documented $>.97\%$ correlation with
venous testing

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Highly accurate results

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Documented $>.97\%$ correlation with
venous testing

Highly accurate results

If

The Tamarac Test

Documented $>.97\%$ correlation with venous testing

Highly accurate results

If collection and handling instructions are followed TO THE LETTER

Falsely-elevated results are
nearly always
the result of improper specimen
collection or handling

Inaccurate results are nearly
always the result of improper
specimen collection or handling

The two most frequent problems are:

- Improper cleansing of the stick site
- Contamination of the stick site between cleansing and specimen collection

Proper specimen collection, handling and submission

- Lead is everywhere
- Great care is required to protect the integrity of the specimen
- Reading and following collection instructions TO THE LETTER will help assure accurate test results

ANY DEVIATION FROM
EXPECTED ACCURACY IS
MOST LIKELY TO BE THE
DIRECT RESULT OF
IMPROPER SPECIMEN
COLLECTION OR
HANDLING

Tamarac Medical Filter Paper Collection Kit Contents

- Paper towels
- Alcohol wipe
- Gauze pad
- Lancet
- Latex-free adhesive bandage
- Filter paper
- Laboratory request form
- Prepaid mailing envelope

A capillary blood lead testing fact:

- The possibility of specimen contamination by lead remaining on the skin surface after conventional stick site washing and prep is a significant threat to the accuracy of ANY capillary blood lead test

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- This applies to capillary tube as well as filter paper specimens

A capillary blood lead testing fact:

- The possibility of specimen contamination by lead remaining on the skin surface after conventional stick site washing and prep is a significant threat to the accuracy of ANY capillary blood lead test
- This applies to capillary tube as well as filter paper specimens
- When contamination occurs, a falsely-elevated result is the likely outcome

Tamarac Medical provides products to minimize the potential for contamination by residual skin-surface lead

- Highly effective lead removal soap
- Highly effective lead removal wipes

D-Lead® Soap

- Demonstrated capability to remove up to 99.84% of lead from skin surface
- Significantly more effective than conventional hand soap
- U.S. patent pending



D-Wipe® Towels

- Similar lead removal properties to D-Lead® Soap
- Provides a second layer of protection against falsely-elevated results
- U.S. patent pending



The use of D-Lead® Soap and
D-Wipe® Towels is
MANDATORY with The
Tamarac Test

The use of D-Lead® Soap and D-Wipe® Towels is MANDATORY with The Tamarac Test

- Be ABSOLUTELY CERTAIN that D-Lead® Soap is used as instructed for all specimens submitted
- Be ABSOLUTELY CERTAIN that D-Wipe® Towels are used as instructed for all specimens submitted

Technology License

- Tamarac Medical, Inc. holds an exclusive license to use, sell, or offer for sale within The United States D-Lead® Soap, D-Lead ® Dry or Wet Skin Cleaner and D-Wipe® Towels for use in conjunction with the testing of blood lead, or other heavy metals levels of infants, children and pregnant and lactating women.
- By virtue of this exclusive license, the manufacturer of these products, Esca Tech, Inc., may not sell these products to any other distributor or laboratory for use in conjunction with the testing of blood lead or other heavy metals levels of infants, children and pregnant and lactating women in The United States.
- Although a U.S. Patent Application has been filed to cover certain methods of using these products, no patent has yet issued. At this time, all rights of exclusivity arise only from the exclusive technology license granted to Tamarac Medical, Inc. by Esca Tech, Inc. and not from any patent or patent application.

Tamarac Test Specimen Collection Procedure

Preparing the filter paper for collection

- Place paper towel on cleaned collection surface
- Partially remove filter paper from plastic zip bag and write child's name on it
- Return filter paper completely to plastic zip bag

Stick sites

- Finger tip
- Heel
- Ear lobe

Stick site preparation

Proper hand washing is imperative

- Use D-Lead® Soap
- Wash selected hand thoroughly
- Special emphasis on selected ring finger

From the washing location to the stick location

- Hold the wrist of the washed hand and walk or carry the child back to the collection location
- Do not allow child to touch ANYTHING with the selected hand
- When in doubt, do it again

Preparing the filter paper for collection

- Remove filter paper completely from plastic zip bag and place on paper towel on the collection surface
- At this time also open lancet and place on paper towel

Making the stick

- Technician must glove
- Isolate and hold child's selected ring finger
- Scrub stick site thoroughly with D-Wipe® Towel
- Scrub stick site with alcohol pad
- Wipe stick site dry with sterile gauze
- Use lancet to make the stick – refer to phlebotomist chart

Applying blood to the filter paper

- A gentle massage of the finger may encourage blood flow
- Hold finger above filter paper
- Allow ONE large drop to form and fall into the FIRST dotted circle
- Allow ONE large drop to form and fall into the SECOND dotted circle

Applying blood to the filter paper

- Dotted circles are for size and location guidance only
- It is NOT mandatory that the blood fall inside the dotted circles

Applying blood to the filter paper

CAUTIONS

- Be ABSOLUTELY CERTAIN that each spot is fully saturated, front to back, and at least 1/3 inch in diameter
- If you question whether either spot is of inadequate size, add an additional drop of blood of the required size anywhere in the test area of the filter paper

DO NOTS

- DO NOT allow child's finger to touch filter paper
- DO NOT daub blood on the filter paper
- DO NOT allow the filter paper to contact anything except the paper towel
- DO NOT touch the test area of the filter paper
- DO NOT layer blood
- DO NOT apply more than one drop per circle

DO NOTS

- If any of these “DO NOTS” occur, begin again with a fresh filter paper

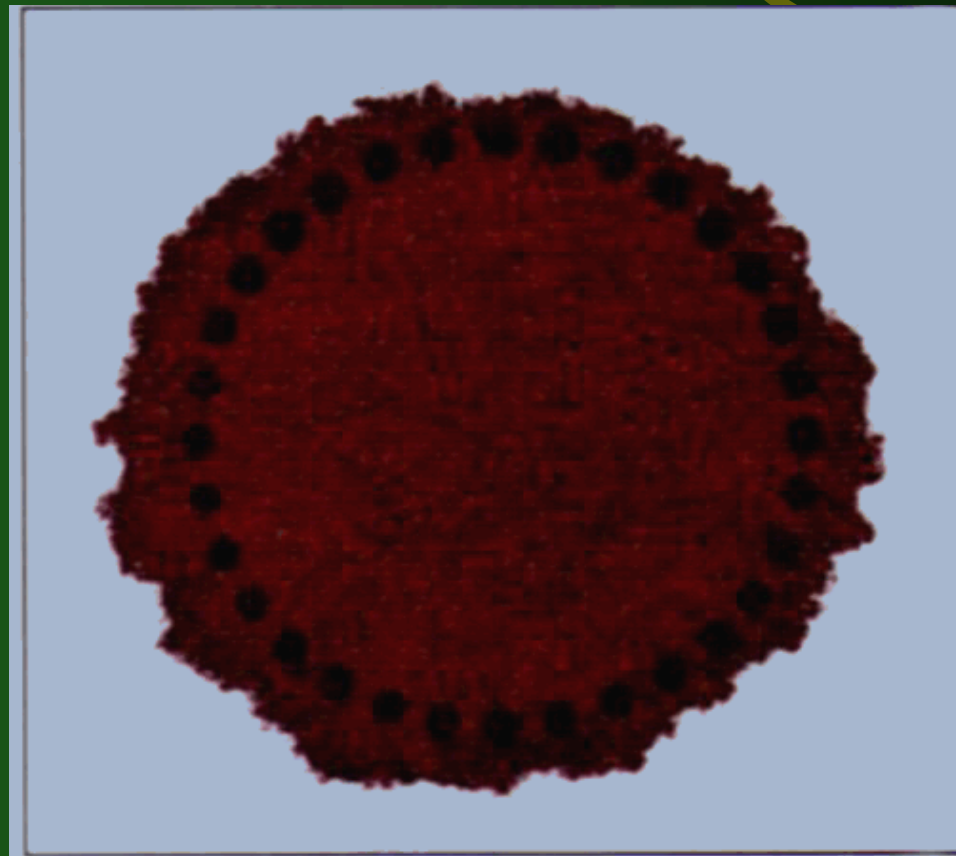
Extra Supplies

- Each box of Tamarac Test Kits contains extra filter papers and laboratory request forms for use when errors occur
- Do not use a second test kit



Properly Collected Specimens
Are Absolutely Imperative

A Properly Collected Specimen



Tamarac Medical Specimen Rejection Criteria

- Testing accuracy depends on properly collected specimens
- We reject ALL specimens that are improperly collected or handled

**Tamarac Medical Will Reject
ALL
Of The Following Types Of
Filter Paper Blood Lead
Specimens**

Insufficient Quantity For Testing



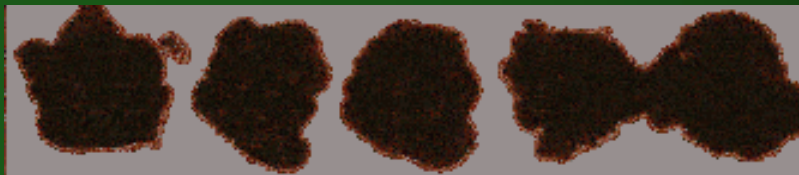
Possible Causes

- Inadequate blood flow caused by improper lancet use
- Removing filter paper before collection is complete
- Applying blood to filter paper with a capillary tube
- Touching filter paper
- Filter paper contact with object or substance

Scratched/Abraded Specimen

Possible Causes

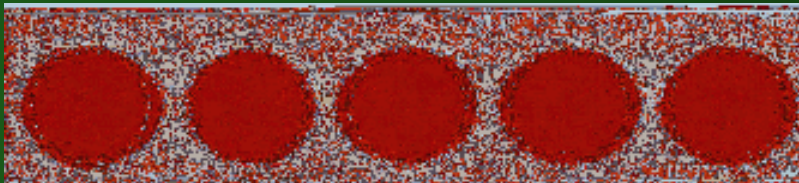
- Applying blood with capillary tube or other device



Improperly Dried Specimen

Possible Causes

- Sealing specimen in plastic zip bag before it is completely dry



Supersaturated Specimen



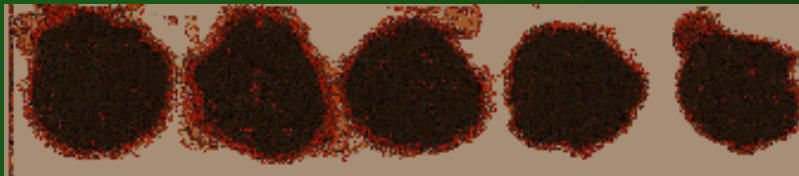
Possible Causes

- Applying excess blood to filter paper, usually with a device
- Applying blood to both sides of the filter paper

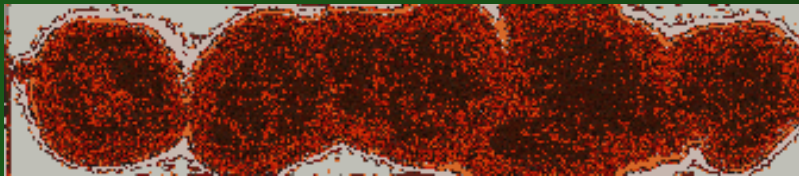
Diluted, Discolored Or Contaminated Specimen

Possible Causes

- “Milking” the puncture site
- Filter paper contact with object or substance



Specimen Showing Serum Rings



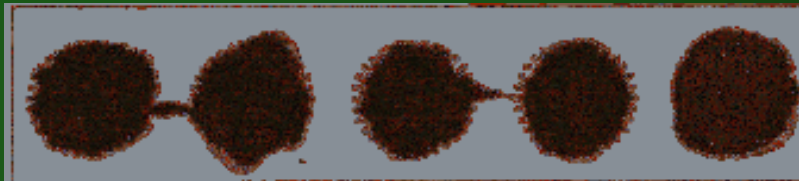
Possible Causes

- Failure to wipe alcohol from puncture site
- Filter paper contact with foreign substance
- “Milking” puncture site
- Improper specimen drying
- Applying blood to filter paper with capillary tube

Clotted Or Layered Specimen

Possible Causes

- Applying more than one drop of blood per circle
- Applying blood to both sides of filter paper



Remember, All Rejected
Specimens Require The
Collection Of A Second
Specimen.

It's Important To Do It Right
The First Time.

Handling the collected specimen

- Allow to dry thoroughly under “tented” paper towel
- While drying, perform hemoglobin test and fill out laboratory request form
- Apply latex-free adhesive bandage
- Write child’s name on plastic zip bag
- Place dried filter paper in plastic zip bag and seal
- Retain bottom copy of lab request form
- Staple remaining copies to plastic zip bag
- Insert in prepaid mailing envelope, seal securely and mail
- Put as many specimens in envelope as will comfortably fit; do not over stuff the envelope

The background of the slide is a solid dark green. On the right side, there is a large, abstract yellow-green shape that resembles a stylized arrow or a corner being peeled away, pointing towards the center of the slide.

Filling out the lab request form

Filling out the lab request form

- **Upper Left Quadrant**
- Patient identification and demographic information
- Complete information is essential
- We are required to provide this information to the state department of health

Filling out the lab request form

- **Lower Left Quadrant**
- SUBMITTING HEALTH PROFESSIONAL
- Affix provided peel-and-stick label
- Signature

Filling out the lab request form

- **Right Half of Form**

Filling out the lab request form

- **Right Half of Form**
- Specimen type is capillary unless venous blood is spotted onto the filter paper

Filling out the lab request form

- **Right Half of Form**
- Purpose
- Screen = routine screening test
- Venous Confirm = venous whole blood specimen to confirm elevated capillary result
- Follow Up = monitoring confirmed elevated BLL

Filling out the lab request form

- **Right Half of Form**
- Sample Collector
- Name (NOT SIGNATURE) of the person actually collecting the specimen is REQUIRED
- Please PRINT legibly

Filling out the lab request form

- **Right Half of Form**
- Billing information
- Fill in completely
- Fill in accurately
- Provide copy of insurance card

Stick Site Prep When Hand Washing Facilities Are Not Available

- Use of The Tamarac Medical Waterless Blood Lead Test Kit

**Tamarac Medical Recommends
The Use of Our Standard Hand
Washing And Stick Site Prep
Protocol. Waterless Specimen
Collection Is Possible When
Hand Washing Is Impossible,
Or Impractical.**

Waterless Specimen Collection Procedure

- Use of D-Lead® Dry or Wet Skin Cleaner is MANDATORY
- U.S. Patent Pending



Waterless Specimen Collection Procedure

- Follow standard procedures except for stick site cleansing and prep

Waterless Stick Site Cleansing and Prep Procedure

A decorative graphic element consisting of a curved, wedge-like shape in a bright lime green color, positioned on the right side of the slide, extending from the middle towards the bottom right corner.

Waterless Stick Site Cleansing and Prep Procedure

- Hold patient's selected ring finger, and apply a generous amount of D-Lead® Dry or Wet Skin Cleaner

Waterless Stick Site Cleansing and Prep Procedure

- Hold patient's selected ring finger, and apply a generous amount of D-Lead® Dry or Wet Skin Cleaner
- Scrub stick site vigorously with one SMALL gauze pad

Waterless Stick Site Cleansing and Prep Procedure

- Hold patient's selected ring finger, and apply a generous amount of D-Lead® Dry or Wet Skin Cleaner
- Scrub stick site vigorously with one SMALL gauze pad
- Dry stick site thoroughly with LARGE gauze pad, removing all D-Lead® Dry or Wet Skin Cleaner

Waterless Stick Site Cleansing and Prep Procedure

- Hold patient's selected ring finger, and apply a generous amount of D-Lead® Dry or Wet Skin Cleaner
- Scrub stick site vigorously with one SMALL gauze pad
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- Scrub stick site thoroughly with alcohol wipe
- Dry stick site thoroughly with second small gauze pad
- Make stick and proceed per standard instructions

Your test results can be:

- Mailed
- Faxed
- Downloaded from Tamarac Medical's secure website (additional paperwork required)
- Please inform us of your preference

Notification of elevated results

- You will receive an immediate phone call or fax
- Collection of venous specimen is required to confirm elevated filter paper result

Re-Ordering Tamarac Test Kits

- Call 1-800-842-7069
- Order 2 weeks in advance of need
- Maintain a 30-day supply of kits to protect against backorders
- Use oldest kits first

Tamarac Medical Contact:

- For questions, or additional information
- Ken Kahle, Director, Extra-Laboratory Affairs (601) 626-9399, (601) 880-3578
e-mail -- kkahle@tamaracmedical.com

There are no short cuts

- Accurate results depend on proper specimen collection and handling
- There is no substitute for attention to detail

Remember For EVERY Specimen Collection

- The Tamarac Test is highly accurate
- The primary threat to this accuracy is failure to follow specimen collection and handling instructions precisely



QUESTIONS ?
CALL US !